

Global CAT Architecture

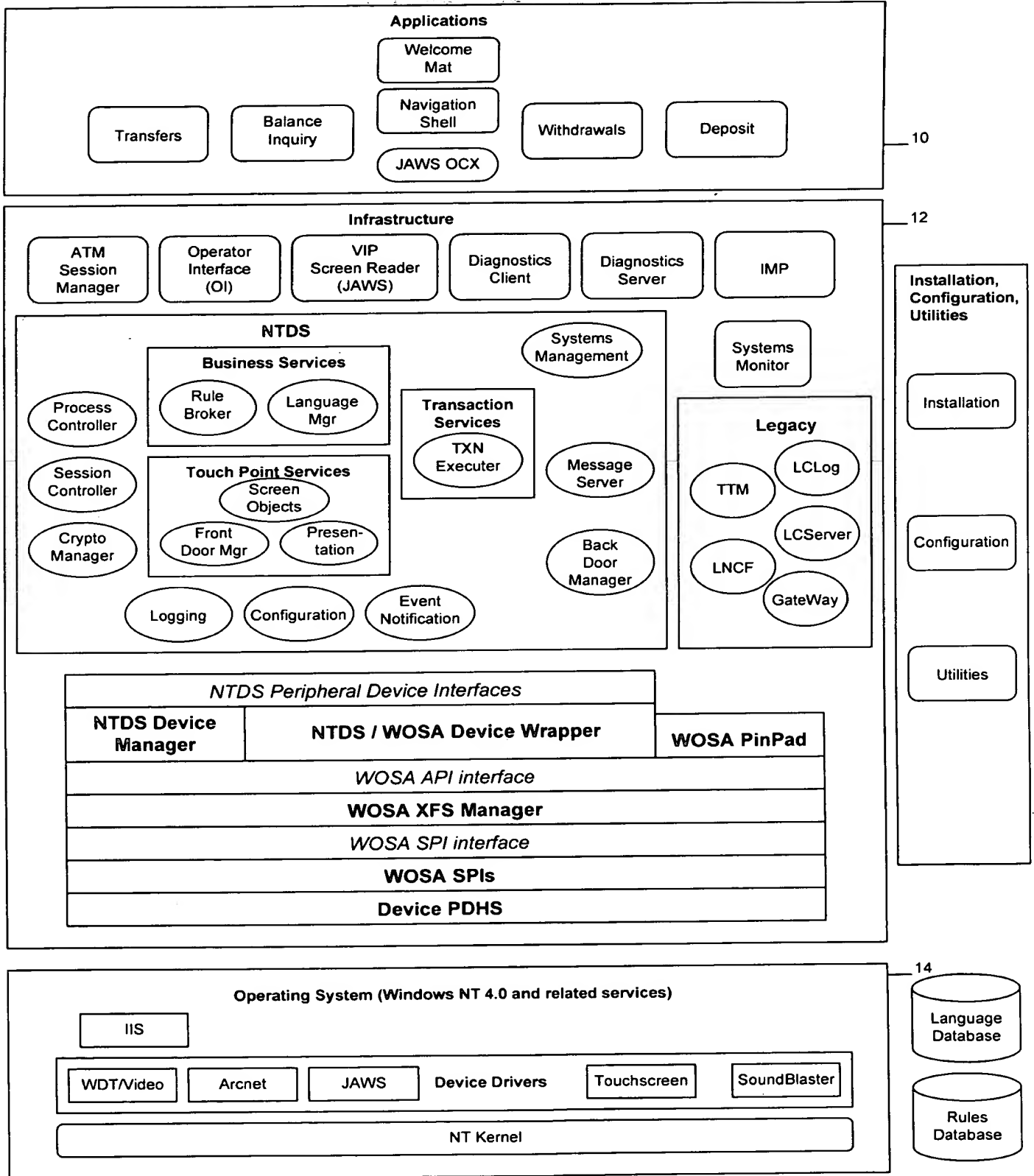


FIG. 1

16	Process Control: System Startup and Shutdown
18	System Monitor
20	VIP Headphones
22	VIP Screen Reader
24	Operator Interface
26	ATM Session Manager (ASM)
28	Devices
30	System Management
32	Diagnostics
34	Intelligent Maintenance Panel (IMP)
36	Logging
38	Installation and Fallback
40	Configuration

FIG. 2

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42 —	Starting and Monitoring Platform Processes and Services
44 —	Restarting Processes or Rebooting the System
46 —	Coordinating an Orderly Shutdown in Most Cases
48 —	Maintaining a Registry of Processes Started
50 —	Root of Most System Management Commands

FIG. 3

Global CAT Processes and Services

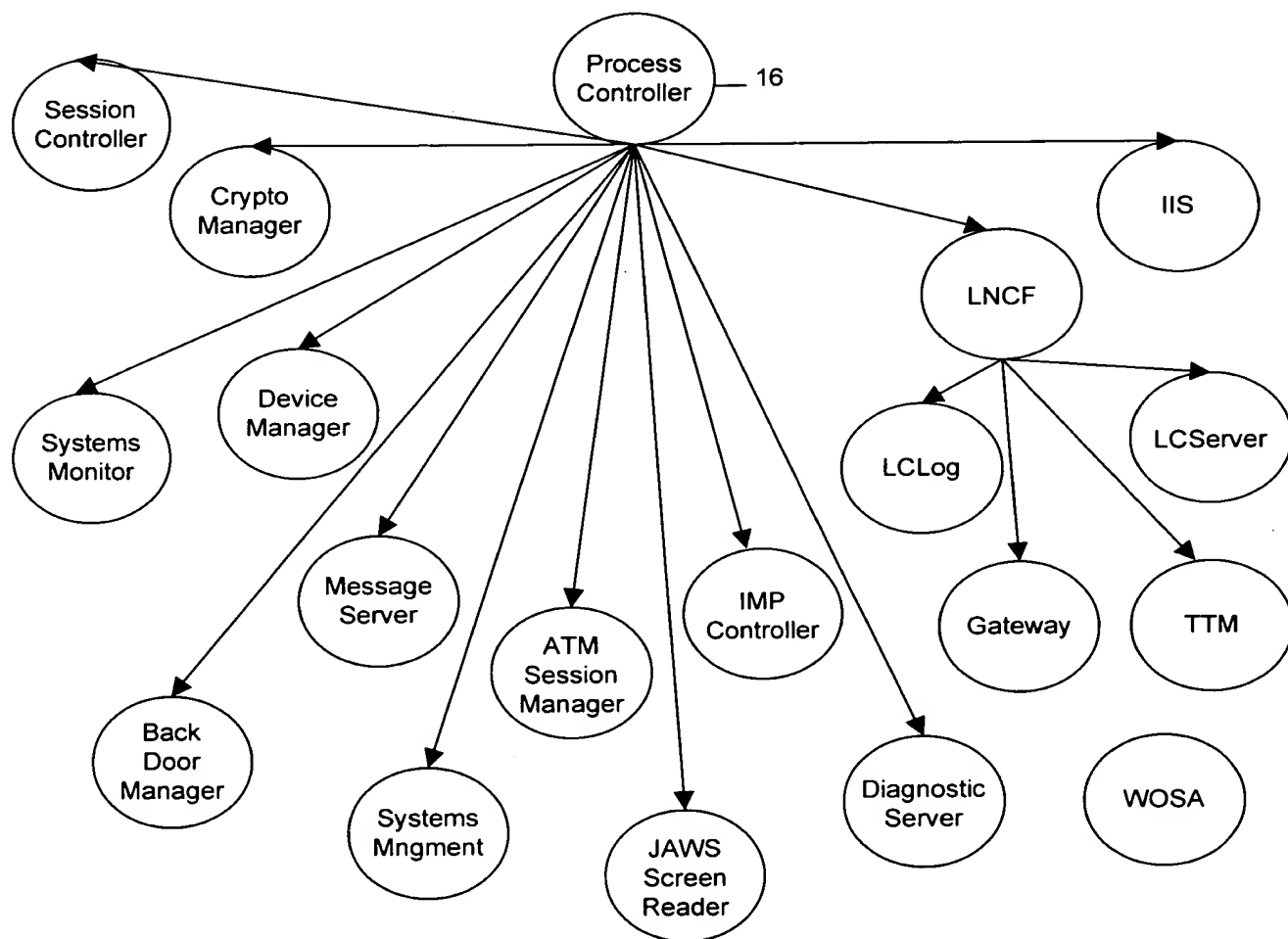


FIG. 4

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56	Blanking and Unblanking a Front Screen Display During System Shutdown and Startup
58	Resetting a Hardware Watchdog Timer Periodically
60	Resetting the Hardware Watchdog Timeout Value for System Operation and Reboot
62	Sending Notification to INC when the System has been Reset due to the Watchdog Timer

FIG. 6

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64	VIP application starts either by detection of headphone insertion or by double tap
66	Software control of audio amplifier output for routing to either speaker or headphone
68	Audio amplifier board with software control
70	Diagnostics for testing functionality of amplifier board

FIG. 7

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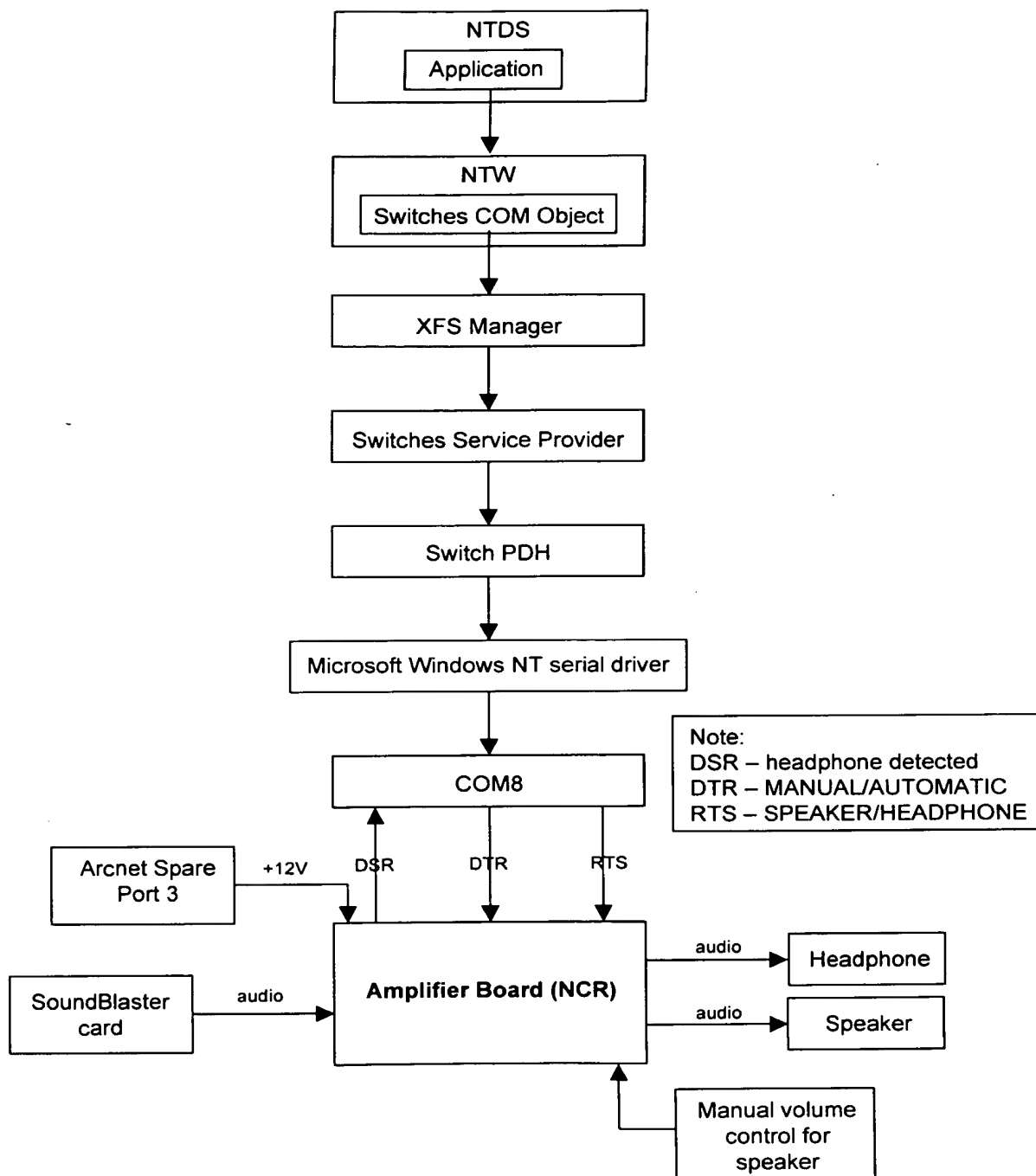


FIG. 8

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72	Text-to-speech capability
74	Screen layout and navigational method that allows sequence through screens and selections using only the touchscreen

FIG. 9

VIP Screen Layout

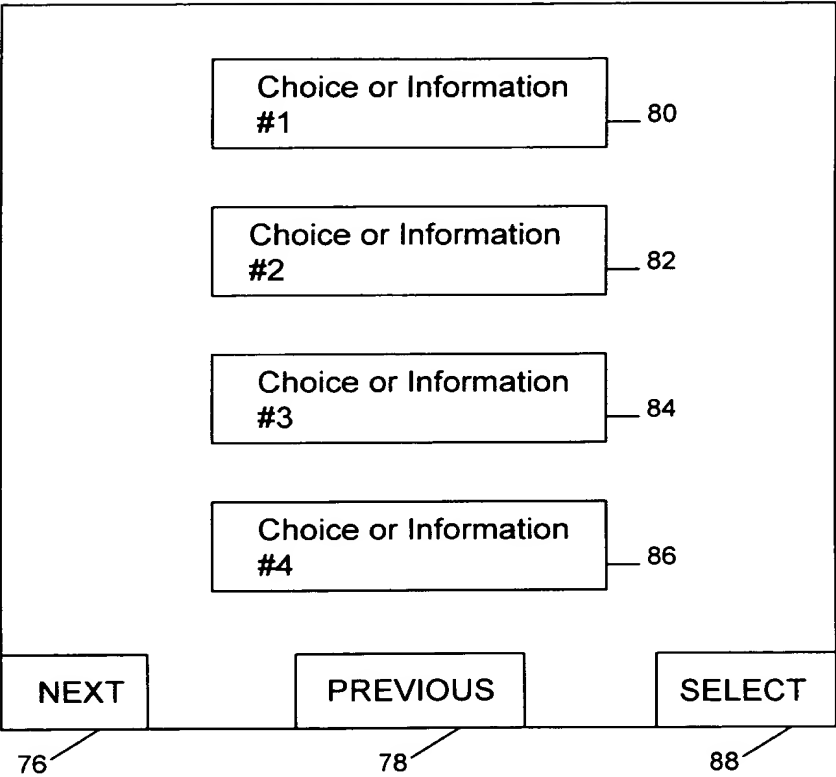


FIG. 10

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Screen Presentation

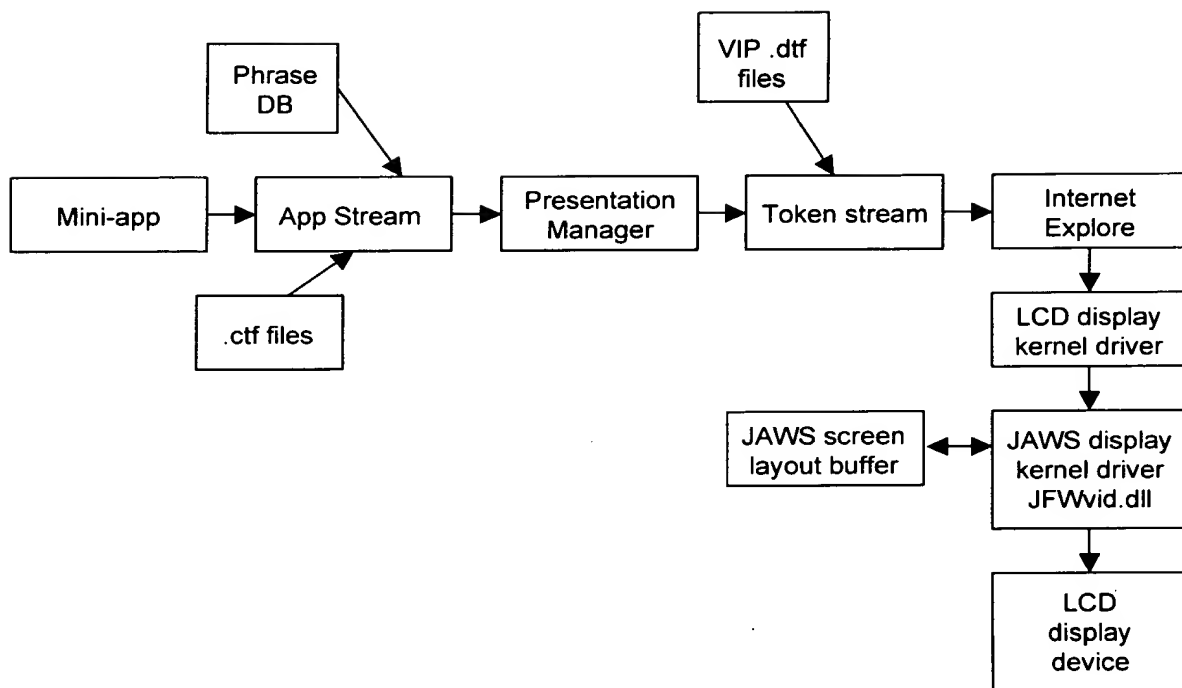


FIG. 11

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Navigating To Choice

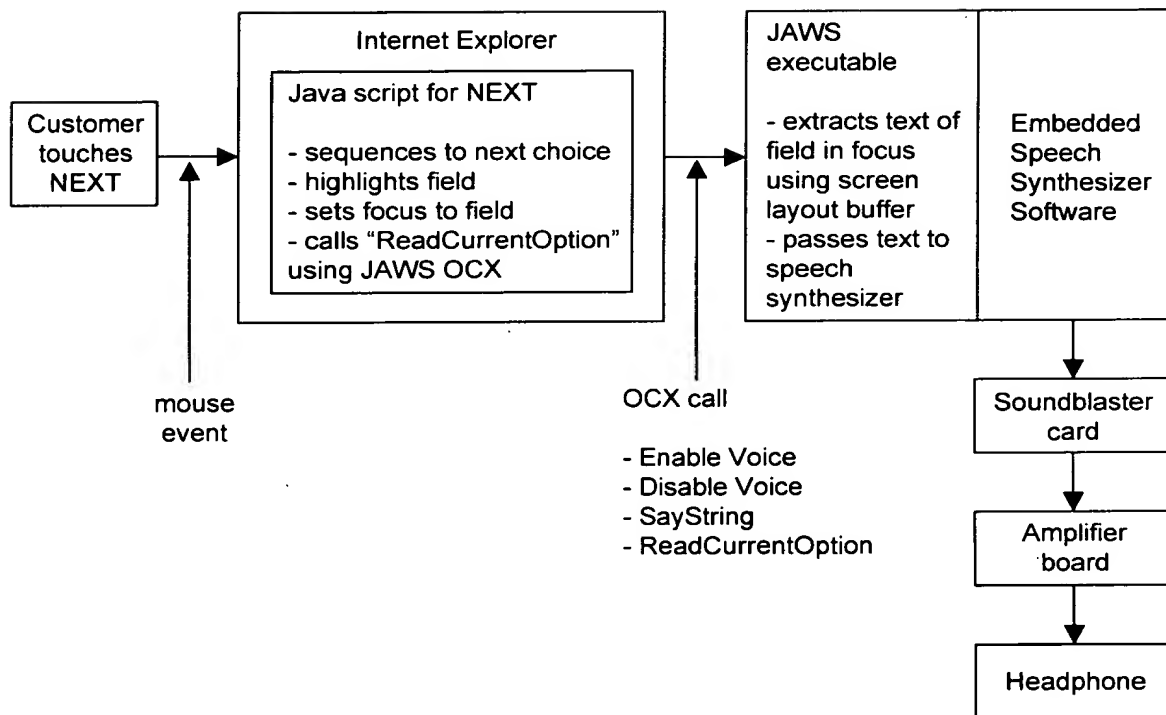


FIG. 12

Selecting a Choice

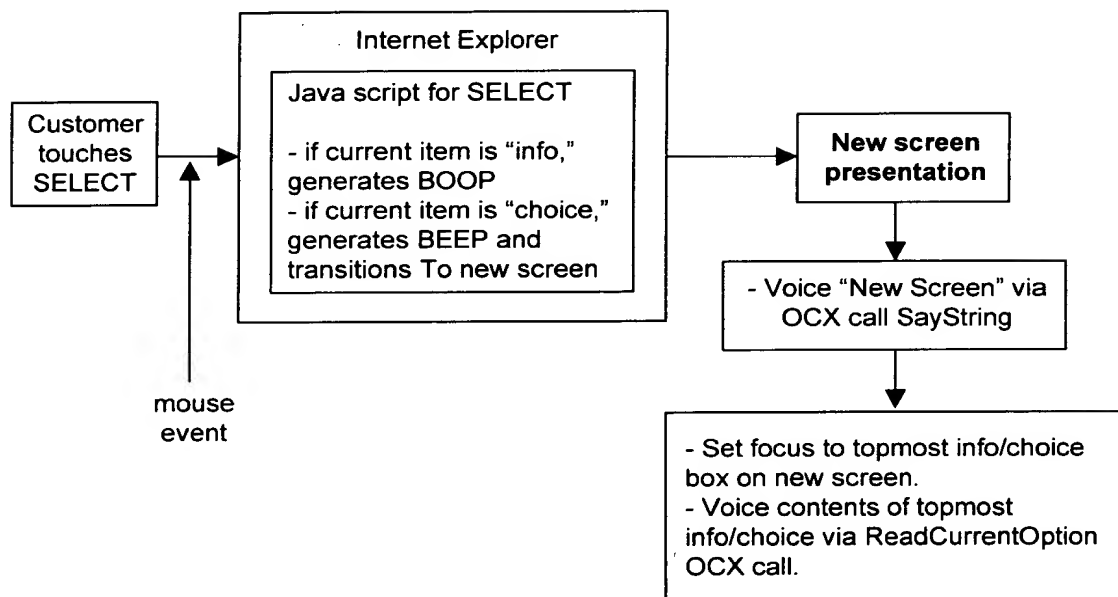


FIG. 13

90	Orderly shut down or reboot system
92	Start ATM
94	Stop ATM
96	Stop ATM immediate
98	View status of ATM (device up/down, host up/down, ATM up/down)
100	View activity/MIS log (peruse)
102	View NT event logs (log viewer)
104	View software release information
106	Configure ATM (auto and manual configuration)
108	View ATM configuration
110	View TTM status
112	Load keys (P75)
114	Start back admin
116	Start diagnostics (P75)
118	Start command shell
120	User account administration

FIG. 14

Components Overview: Global CAT in Operator Session

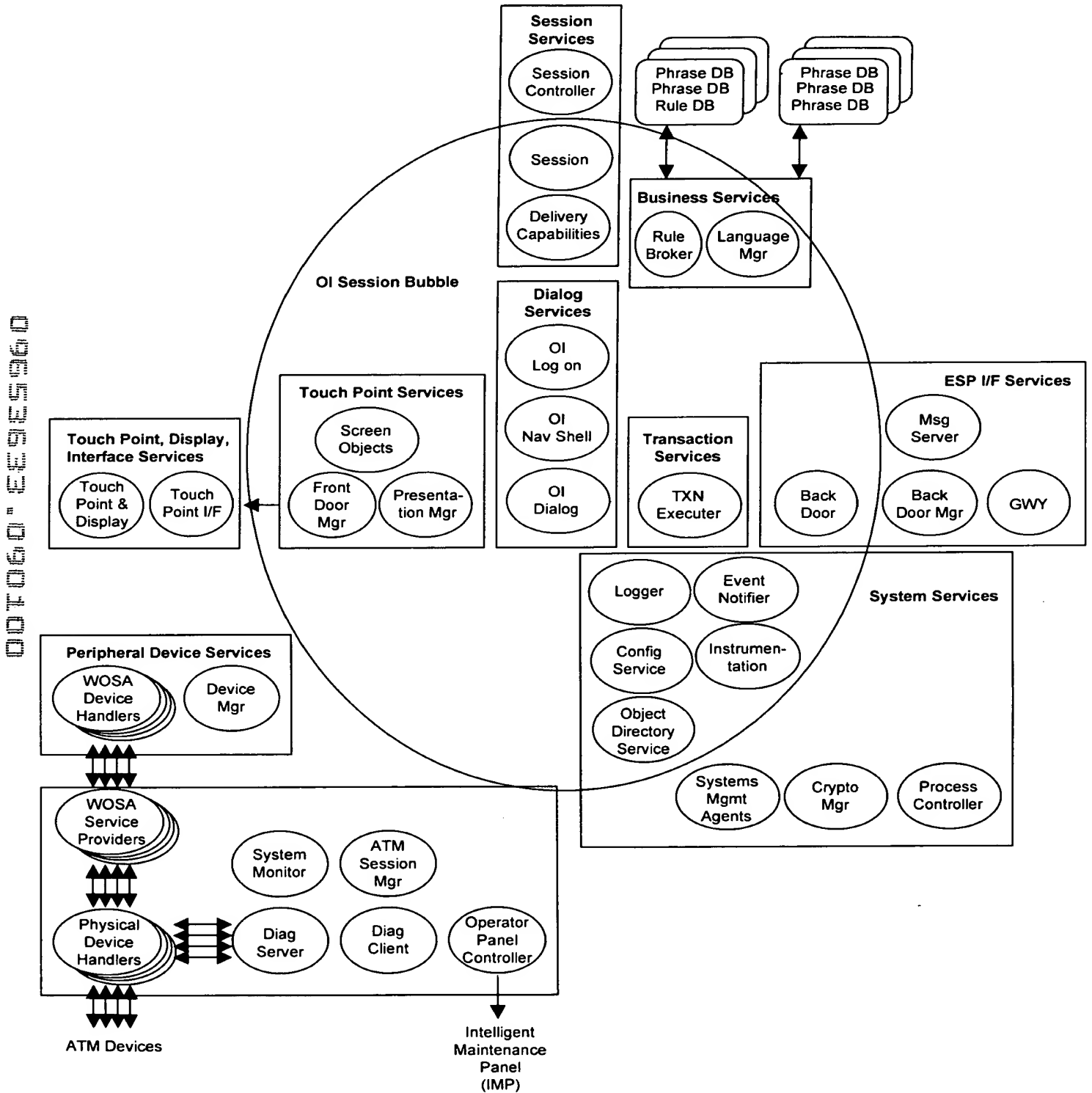


FIG. 15

122	Bring up browser in full-screen mode
124	Coordinate starting and re-starting of customer sessions
126	Coordinate starting of an operator session at the front screen
128	Coordinate entering into and exiting out of hardware diagnostics initiated from the intelligent maintenance panel (IMP)
130	Support "Start/Stop/Stop immediate CAT" functions
132	Display the out-of-service screen under various scenarios
134	Recover from out-of-service by monitoring status of host connection, and status of devices and switches which impact usability of the ATM by customers
136	Report various ATM status information when the system management agent or operator interface inquires the component
138	Report when the ATM is out of service, and when it is back in service after having been out of service
140	Report the state of the ATM to indicate whether it is in use or idle, diagnostics is running, or back administration utility is running

FIG. 16

Responsibilities	Collaborators
Bring up browser	Browser
Blank and un-blank front screen	Video blanking kernel driver
Start and restart customer session	Web Browser, customer session ASP script, Session Controller
Start operator session at front screen	Web Browser, operator session ASP script, Session Controller
Enter and exit diagnostics	Operator Panel Controller, Device Manager
Start/stop/stop immediate CAT	Device Manager, Process Controller
Display out-of-service screen	Browser
Receive session status changes	Welcome Mat, Operator Interface
Recover from out of service	Device Manager, Back Door Manager
Request device status	Device Manager
Receive host status instrument events	Back Door Manager
Respond to inquiry about ATM status	Command Dispatch Agent, Operator Interface
Receive OI dialogs status changes	Back Admin Dialog, Diagnostics Dialog
Report different states of ATM	Event Notifier

FIG. 17

142	Cash dispensing modules
144	Depositors
146	Dynamic readers
148	Secure touchscreens
150	Printers
152	Switches and indicators

FIG. 18

154	Status Monitoring
156	Inquiry and Control Commands
158	File Transfer and Remote Command Execution
160	Software Distribution
162	Remote Peruse
164	Log Upload
166	Auto Configuration
168	DNS Load Balancing Support
170	Device MIS
172	Customer MIS
174	Time Synchronization

FIG. 19

Device	Description
CAT	Entire CAT
CRT/TSC/STS	Touch Screen
RDR	Dip/Dynamic Reader
PTR/PRT	Printer
CDM	Cash Dispenser
DEP	Depositor
TRD	Transfer Card Reader
SAF	Cash Safe
FLS	CPE Flash Memory
SW	Switch
KMM	Eurocheck NM
CS	Citishield
SCM	Belgium SCM
PIN	PIN PAD*

FIG. 20

176	Executes diagnostics requests on behalf of a diagnostic client, such as the IMP controller using OLE automation
178	Communicates directly with the physical device handlers (PDH) for all devices
180	Activates PDHs at the beginning of a diagnostics session (Start Diag)
182	Uses the PDH message interface to command and/or control devices
184	Deactivates PDHs at the end of diagnostics session (End Diag)
186	Performs various diagnostics tests on certain peripheral devices
188	Can determine and provide the specific device list to a client

FIG. 21

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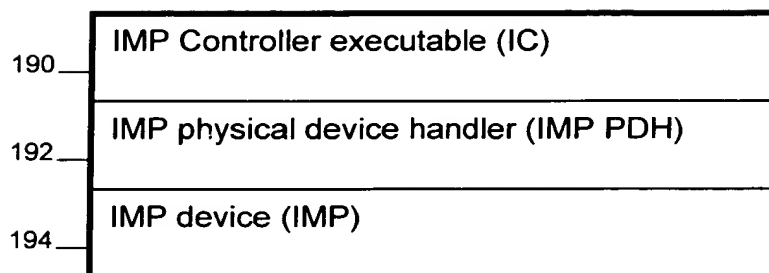


FIG. 22

INIT	Device Manager "device initialization"
OOS	Out of Service condition
IDLE	At "Hello screen" (ready for customer session)
BUSY	Customer session in progress
ADMN	Back Admin (proofing) in progress (within OI session)
DIAG	Diagnostics Session in progress (note: this mode display is not real useful for the pilot due to only rear diagnostics being supported in FLTLL IMP screen mode)
OPEN	Safe door is open (this status is obtained from DM)
TEST	CDM Tests (or Self Tests) in progress NOT in the Pilot <u>phase</u>
DOWN	The result of doing a STOP CAT
OI	OI Session in progress (NEW Session State for VIP GCAT)

FIG. 23

Diagnostic Component's Interactions

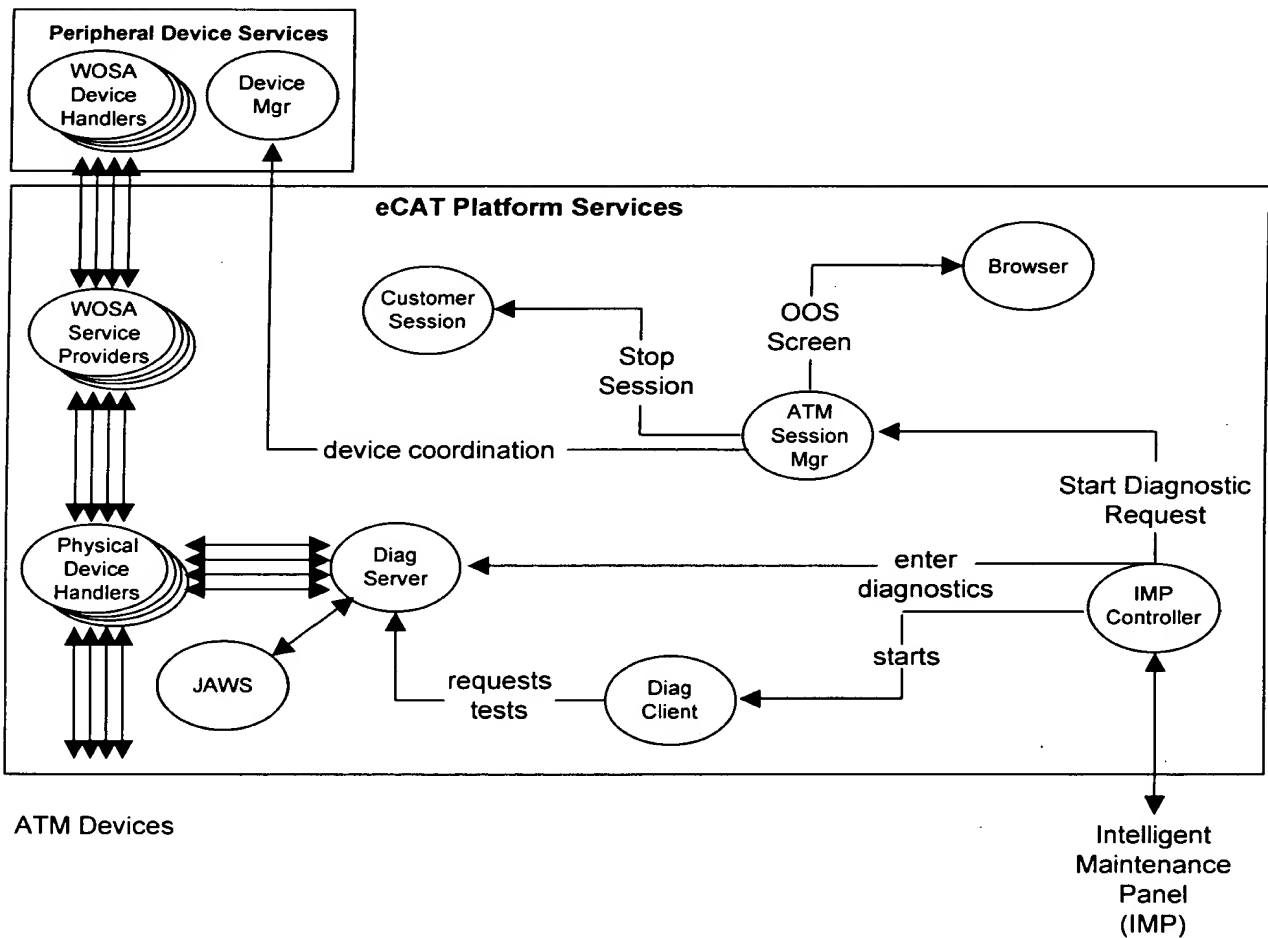


FIG. 24

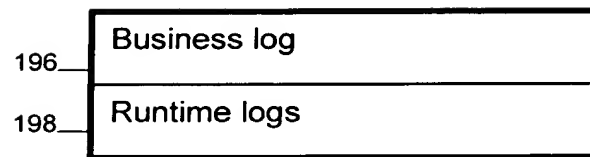


FIG. 25

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200	Distribution and release of software packages
202	Activation of release packages
204	Cutover of release packages
206	Fallback to previously running versions of the software
208	Backing out of the last distributed release package
210	Reinstalling the previous software versions

FIG. 26

Installing and configuring software

212

Configuring the CAT to be operational

214

FIG. 27